

A3 ~~claims~~

1. An isolation transformer arrangement comprising an isolation transformer (1;17) having magnetically coupled primary and secondary winding arrangement (2,3;18,25 wherein one of either the primary (2;25) or the secondary (3;18) winding is formed of at least one insulating substrate (11a,b,c; 29-32) having on a surface thereof a planar conductive trace (12a,12b) and the other (2;25) is formed of a plurality of turns of an insulated wire conductor (9) characterised in that the insulating substrate comprises a multi-layer printed circuit board (19) having also provided thereon one or more discreet electric components arranged in two electrically separate circuits (20;21) with each circuit connectable to a respective one of the primary (2;25) and the secondary (3;18) windings of the isolation transformer (1;17); and in that the insulation (10) of the wire conductor (9) is adapted to provide a desired level of electrical isolation between the circuits (20;21).

2. An isolation transformer arrangement as claimed in Claim 1 characterised in that the wire winding (25) is provided spiralled about an outer surface of a hollow bobbin (24) locatable on a surface (33) of the printed circuit board (19); the planar trace winding (18) is coaxially arranged about a hole (35) through the printed circuit board (19); and in that there is further provided a magnetic core element (22,27) positionable through the hole (35) and the hollow bobbin (24) to magnetically couple the windings (18,25).

3. An isolation transformer arrangement as claimed in Claim 1 or Claim 2 characterised in that the primary and the secondary windings (2,3;25,18) are releasably collocatable.

4. An isolation transformer arrangement (1;17) as claimed in any preceding claim characterised in that the

planar conductive	trace winding (3;18) is the secondary winding.
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5. An isolation transformer arrangement as claimed in any preceding claim characterised in that a one (20) of the two circuits (20,21) is adapted for connection to patient sensors and is connected to the winding (18) formed of the planar conductive trace and in that the other of the two circuits (21,20) is adapted to receive power supply line voltages and is connected to the wire winding (25).

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$\begin{matrix} A_{26} \\ A_2 \end{matrix} \triangleright$